WHAT IS CLAIMED IS:

1. A medical electrode comprising:

a housing;

a conductor and an electrolyte disposed within the housing; and

a high temperature adhesive that remains capable of adhering the electrode to a patient's skin after the adhesive has been exposed to temperatures of up to 200°F for 4 hours, positioned to adhere a surface of the electrode to a patient's skin.

2. The electrode of claim 1 wherein said housing comprises a molded elastomeric member.

3. The electrode of claim 1 further comprising a high temperature adhesive positioned to secure components of the electrode to each other.

4. The electrode of claim 1 wherein said electrolyte is encapsulated.

5. The electrode of claim 1 wherein said high temperature adhesive is selected from the group consisting of high performance silicone or acrylic adhesives.

6. The electrode of claim 1 wherein said high temperature adhesive comprises a high performance silicone transfer adhesive.

7. The electrode of claim 4 wherein said electrolyte is disposed in breakable capsules.

8. The electrode of claim 7 wherein said conductor comprises a metal screen positioned between the capsules and the surface that is adhered to the patient.

9. The electrode of claim 3 wherein the electrode includes a foam backing joined to the conductor by the high temperature adhesive.

10. A medical electrode constructed to be applied to a patient's skin, the electrode comprising:

a housing;

a conductor within the housing; and

an electrolyte disposed within a chamber that is constructed to separate the electrolyte from the conductor until the electrode is to be used;

wherein the electrode is constructed so that said electrolyte, when released from said chamber, flows freely from the chamber towards the patient's skin without application of pressure to the chamber.

11. A medical electrode constructed to be applied to a patient's skin, the electrode comprising:

a housing;

a conductor within the housing;

an electrolyte disposed within a chamber that is constructed to separate the electrolyte from the conductor until the electrode is to be used; and

an absorbent pad, positioned adjacent the conductor, on the side of the conductor that is closer to the patient's skin when the electrode is in use, and configured to absorb the electrolyte when it is released from the chamber and provide a wet layer between the conductor and the patient's skin.

12. A medical electrode constructed to be applied to a patient's skin, the electrode comprising:

a housing;

a conductor within the housing; and

an electrolyte disposed within a chamber that is constructed to separate the electrolyte from the conductor until the electrode is to be used, the chamber being formed of a brittle material that is breakable by the application of a force to the chamber.

13. The electrode of claim 12 wherein the brittle material is selected from the group consisting of glass, ceramic, and bakelite plastics.

14. The electrode of claim 12 wherein the chamber material is brittle at room temperature.

15. The electrode of claim 10, 11, or 12 wherein the chamber comprises a glass ampule.

16. The electrode of claim 10, 11 or 12 wherein the electrolyte is a saline solution.

17. The electrode of claim 10 or 12 further comprising an absorbent pad, positioned adjacent the conductor on the side of the conductor that is closer to the patient's skin when the electrode is in use.

18. The electrode of claim 17 wherein said absorbent pad comprises an absorbent material selected from the group consisting of sponges, gauze, carbon fiber mat, cellulose, and natural and synthetic fibrous batts.

19. The electrode of claim 10, 11 or 12 wherein the conductor comprises a screen or mesh material.

20. The electrode of claim 10, 11 or 12 wherein the housing comprises an elastomeric member.

21. The electrode of claim 10, 11 or 12 wherein an edge of the conductor is molded into a portion of the housing.

22. A medical electrode product comprising:

(a) an electrode comprising:

a housing;

a conductor within the housing; and

an electrolyte disposed within a chamber that is constructed to separate the electrolyte from the conductor until the electrode is to be used; and

(b) a package, in which said electrode is disposed prior to use, including an actuator device constructed to release said electrolyte from said chamber when the electrode is removed from the package.

23. The product of claim 22 wherein said chamber comprises a breakable capsule.

24. The product of claim 23 wherein said breakable capsule comprises a glass ampule.

25. The product of claim 22 wherein said actuator comprises rolls through which the electrode is pulled during removal from the package.

26. The product of claim 25 wherein said rolls are positioned to rupture said chamber during removal.

27. The product of claim 22 wherein said electrode further comprises an absorbent pad, positioned adjacent the conductor on the side of the conductor that is closer to the patient's skin when the electrode is in use.

28. The product of claim 22 wherein said conductor comprises a screen or mesh material.

29. A medical electrode constructed to be applied to a patient's skin, the electrode comprising:

a housing;

a conductor within the housing;

an electrolyte disposed within a chamber that is constructed to separate the electrolyte from the conductor until the electrode is to be used; and

an indicator constructed to provide an indication to the user of whether the electrolyte has been released from the chamber.

30. The electrode of claim 29 wherein said indication is a visual and/or audible indication.

31. The electrode of claim 29 wherein said indication comprises a color change.

32. The electrode of claim 29 said indicator includes a semiconductor chip configured to store information concerning the status of the electrolyte and provide this information to a defibrillator control box upon demand.

33. The electrode of claim 29 or 32 wherein said indicator is configured to detect the presence of moisture.

34. The electrode of claim 29 wherein the indicator is configured to detect moisture, and, upon detecting moisture, to send information via the chip to the defibrillator control box upon demand.

35. A medical electrode product constructed to be applied to a patient's skin, the product comprising:

(a) an electrode comprising a housing and a conductor and an electrolyte disposed within the housing; and

(b) a package, within which the electrode is stored until use, that is pressurized sufficiently to minimize electrolyte loss through evaporation.

36. A medical electrode product constructed to be applied to a patient's skin, the product comprising:

(a) an electrode comprising a housing and a conductor and an electrolyte disposed within the housing; and

(b) a cover disposed over the electrolyte in sealing engagement, the cover defining a region adjacent the electrolyte that is pressurized sufficiently to minimize electrolyte loss through evaporation.

37. The medical electrode product of claim 35 or 36 wherein the package or region is pressurized to a pressure that is at least 25% above the ambient pressure at the time of sealing.

38. A coupling device for use with a defibrillator paddle, the coupling device comprising:

a housing;

a conductor within the housing;

an electrolyte disposed within a chamber that is constructed to separate the electrolyte from the conductor until the electrode is to be used; and

a mounting device constructed to allow the coupling device to be removably mounted on the defibrillator paddle.

39. The coupling device of claim 38 wherein the mounting device comprises a clip.

40. The coupling device of claim 38 wherein the mounting device comprises an adhesive.

41. The coupling device of claim 38 wherein the coupling device is configured to provide a conductive path from the defibrillator paddle to a patient's skin.

42. The coupling device of claim 38 wherein the chamber comprises a breakable capsule.

43. The coupling device of claim 42 wherein the chamber comprises a glass ampule.

44. The coupling device of claim 42 wherein the capsule is configured to be broken by applying pressure to the coupling device.

45. The coupling device of claim 38 further comprising an absorbent pad, positioned adjacent the conductor on the side of the conductor that is opposite the defibrillator paddle when the coupling device is in use.

46. The coupling device of claim 38 wherein the conductor comprises a screen or mesh material.

47. The coupling device of claim 42 wherein the coupling device further comprises a screen configured to prevent fragments of the capsules from contacting a patient's skin when the capsules are broken.

48. A medical electrode constructed to be applied to a patient's skin, the electrode comprising:

an elastomeric housing, configured to conform to the body contours of the patient;

a conductor within the housing; and,

within the housing, an electrolyte disposed within a chamber that is constructed to separate the electrolyte from the conductor until the electrode is to be used.

49. The medical electrode of claim 10, 11, 12 or 48, further comprising a high temperature adhesive that remains capable of adhering the electrode to a patient's skin after the adhesive has been exposed to temperatures of up to 200°F for 4 hours, positioned to adhere a surface of the electrode to a patient's skin.

50. The medical electrode of claim 48 wherein the housing is a unitary, integrally molded part.

51. The medical electrode of claim 48 wherein the housing comprises a thermoplastic elastomer.

52. The electrode of claim 10, 11, or 12 wherein the chamber is located in an element configured to be removed from the electrode after the electrolyte is released from the chamber and before the electrode is placed on the patient.

53. The electrode of claim 52 wherein the element in which the chamber is located is a release liner for sealing a skin-contacting surface of the electrode prior to use.

54. The electrode of claim 52 wherein the chamber comprises a glass ampule.

55. The electrode of claim 52 wherein the electolyte is a saline solution.

56. The electrode of claim 52 further comprising an absorbent pad, positioned adjacent the conductor on the side of the conductor that is closer to the patient's skin when the electrode is in use.

57. The product of claim 23 wherein the package comprises substantially rigid walls and the actuator device brings the walls closer together in order to open the package, at which time the walls are brought together sufficiently to break the capsule.

58. The product of claim 57 wherein the walls are hinged and rotate about the hinge to break the capsule.

59. The product of claim 23 wherein the actuator comprises a gradually tapered throat that narrows to slightly less than a separation that will break the capsule as the electrode is drawn through the tapered throat to remove it from the package.

60. The electrode of claim 29 wherein the indicator is a humidity or wetness indicator visible through a transparent window in the housing.

61. The electrode of claim 29 wherein the indicator comprises a humidity or wetness sensor connected by wires extending from the housing.